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ASSESSING BREAST CANCER BURDEN AMONGST WOMEN AT GENERAL HOSPITAL KATSINA, STATE NIGERIA

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ABSTRACT

Breast cancer is today becoming one of the serious health issue affecting about 3.2 million worldwide. Its increase is attributed to several factors, like increase in life expectancy, urbanization and adoption of western lifestyles, late diagnosis of breast cancer due to shortages of health personnel and infrastructure among others. However, incidences of breast cancer in Nigeria, particularly in its northern states, which includes Katsina states appears to be under reported due to lack of comprehensive statistics about number of women of reproductive age afflicted by the disease. Therefore, this paper assessed breast cancer burden amongst women of reproductive age at the General Hospital Katsina, Katsina state Nigeria. The paper employed qualitative research method, where an in-depth interviews were held with key informants (i.e. one Medical doctor/General Surgeon, a nurse in-charge of female surgical ward and a breast cancer patient respectively). The findings of the study indicates high rate of breast cancer prevalence amongst women of reproductive age attending the hospital for treatment, lack of specialized cancer unit fully equipped with medical facilities and personnel; cancer cases are handled by general surgeons and nurses; advanced cancer cases beyond the reach of the hospital are referred to nearby teaching hospitals; certain factors associated with socio-economic and socio-cultural also affects early access to medical health care facilities, thus compounding issues. The study recommends the following: establishment of specialized cancer center at the hospital fully equipped with medical facilities and professionals; collaboration with relevant stakeholders to address the problems of high cost of cancer treatment, patients' education and awareness, and other socio-economic and socio-cultural issues affecting healthcare access.

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INTRODUCTION

Cancer is a non-communicable disease that has affected 40% or 12 million people yearly, and that out of this figure more than 7.6 million lost their lives. It was also projected that death from cancer would increase from 7.6 million in 2007 to 11.5 million by the year 2030. In fact, deaths from cancer exceeds deaths recorded from HIV, Aids, tuberculosis and malaria combined annually. However, cancer can be prevented, treated and cured through palliative care if detected early (Al-Jazeera, 2010).

Breast cancer is one of the commonest cancer that is responsible for the death of about 800,000 women globally and its burden is projected to increase to about 16 million by the year 2020. 70% of the new cases of breast cancer are expected to occur in developing and low income countries (WHO, 2013; Abdulkareem, 2014; Global Burden Disease, 2015 & WHO, 2014). This raises the need for provision of adequate healthcare services by governments in order to reduce the rates of morbidity and mortality from breast cancer. This is because breast cancer belongs to the group of cancers that is potentially curable if diagnosed and treated early (WHO, 2014).

Cancer burden, especially breast cancer is literally quite high in developing countries. Nigeria as a developing nation in sub-Saharan Africa, appears to have the largest breast cancer burden due to its weak healthcare system. Consequently, the World Health Organization reported that breast cancer would be the highest killer disease in Nigeria, as it kills about 40 Nigerians daily. This is followed by cervical cancer, which kills one Nigerian woman every hour; and prostate cancer, which kills 26 Nigerians men daily (Federal Ministry of Health, 2013).

Similarly, over 100, 000 Nigerians are every year diagnosed with various types of cancers and that about 80,000 of those afflicted by the disease die every year (Federal Ministry of Health, 2013). This indeed is worrisome and alarming to both Federal and state governments of Nigeria, especially against the WHO's report that about 70% of cancer deaths occur in developing countries like Nigeria, due to various factors like poor health facilities, Nigeria's large population etc. (Global Burden Disease, 2015; Abdulkareem, 2014; Wagner 1991; Solanke & Adebamowo 1998; Parkin, Bray, Ferlay, & Jemal 2014, Vanguard, 2017).

It was also reported that, breast cancer cases were increasing in Nigeria due to factors such as poor knowledge about breast cancer and lack of early detection measures, insufficient health personnel and infrastructure (Anyanwu, 2000). This therefore, calls for an urgent action to adopt a holistic approach to tackle the menace of breast cancer and indeed all other cancers afflicting the Nigerian citizens, just in the same way the menace of HIV/AIDs, small pox, Guinea worm, tuberculosis were tackled by governments, Non-Governmental Organizations etc. Therefore, this paper assessed breast cancer burden amongst women of reproductive age at the General Hospital Katsina, Katsina state Nigeria. Katsina state is one of the 36 states located in the North western part of Nigeria, where there are inadequate facilities for the diagnosis and treatment of not only breast cancer, but indeed all other type of cancers.

MATERIALS AND METHODS

The paper employed qualitative research method, where an in-depth interview was held with key informants (i.e. a medical doctor and a nurse in-charge of female surgical ward and a breast cancer patient respectively). The medical personnel were selected based on their expertise and schedules of duties. While, the breast cancer patient was selected because of her vulnerability. The hospital was selected because it is the oldest and the largest hospital owned by the Katsina state government, in addition to being a referral hospital from other hospitals located at various local governments of the state.

1. Literature Review and Conceptual Framework

1.1 Concept of Cancer

In general term cancer, is a group of diseases involving abnormal cell growth with the potential to invade or spread to other parts of the body, which if not controlled can lead to death (The American Society, 2018). Breast cancer on the other hand, is a cancerous tumor or malignant which occurs when the abnormal cells invade other parts of the breast, through the blood stream. It usually starts to develop from the milk-producing glands of the breast called “lobules” (The American Society, 2018 and Saunders, Christobel; Jassal, and Sunil 2009).

1.2 Types and Causes of Breast Cancer

There are at least three types of breast cancers: a) the ductal carcinoma, which is the most common type of breast cancer, and this type of cancer starts in the lining

of the milk ducts (thin tubes that carry milk from the lobules of the breast to the nipple); b) the lobular carcinoma breast cancer, which starts in the lobules (milk glands) of the breast; and c) the Invasive breast cancer, which is a type of breast cancer that spread from where it began in the breast ducts or lobules to surrounding normal tissue. It should be noted that breast cancer occurs in both men and women, however, breast cancer in men is rare (<https://www.cancer.gov/publications/dictionaries/cancer-terms/def/breast-cancer>).

Breast cancer is attributable to a wide range of risk factors like being a female, obesity, lack of physical exercise, alcohol drinking, given birth to children at an old age, family history, radiation exposure, androgenic estrogens, nutrition and diet habits, smoking, lack, or short term of breast feeding etc. (Gaudet, Gapstur, Sun, Diver, Hannan, Thun. 2013; World Cancer Report 2014; Brennan, Cantwell, Cardwell, Velentzis, Woodside, 2010; Luo, Margolis, Wactawski-Wende, 2011; Lof, and Weiderpass, 2009; Hulka and Moorman, 2001; Adebamowo, and Ad-ekunle 1999; Hulka and Stark, 1995). The American Cancer Society, (2018) also attributed breast cancer to modifiable factors (i.e. lifestyle of individuals, smoking, alcoholism, obesity etc.) and non-modifiable factors (i.e. inherited genetic mutations, hormones and immune conditions etc.). Other factors identified as contributing to increase in the incidences of cancer in Nigeria include the following: under reporting of cancer cases, due to lack of awareness, insufficient cancer diagnostic health facilities in most public and private health institutions; insufficient health personnel etc. (Abdulkareem, 2014; Parkin, 2008; WHO, 2014; Parkin, Sitas, Chirenje, Stein, Abratt, Wabinga 2008; Jedy-Agba, Curado, Ogunbiyi, 2012; Thun, DeLancey, Center, Jemal, Ward 2010; Vanguard, 2016; and The American Cancer Society, 2018).

1.3 Diagnoses and Treatment of Breast Cancer

Saunders, Christobel, Jassal, and Sunil (2009) identified the following most common signs and symptoms of breast cancer. They include the appearance of a lump in the breast or armpit, which can be with or without pain; a change in the breast size or shape, which results in swelling, thickening or shrinkage especially in one breast; dimpling; pitting/redness of the skin; peeling; flaking/scaling breast skin; discharge of red fluid from the breast nipple etc. Most types of breast cancer can easily diagnosed through microscopic analysis of a sample, otherwise known as biopsy of the affected breast. Breast cancer, can also be diagnosed through the physical examination of the breast by a health care provider (Hulka and Moorman, 2001 and Thomson and Thompson, 2005).

Treatment of cancer, may include a) a surgery and radiation therapy which target the tumor without affecting the rest of the body; b) surgery or sometimes called Lumpectomy, which requires the removal of the affected portion of the breast. Another form of surgery is called mastectomy, which involves the removal of the entire breast and probably the removal of some surrounding tissues around the breast; c) radiation therapy, where high energy waves are used to kill the cancer cells and shrink the tumors; and d) cancer killing chemotherapy medicines, which are administered orally through the mouth or intravenously (Hulka, and Stark, 1995).

Breast Cancer Burden in Nigeria

Breast cancer is one of the commonest types of cancer, which is steadily increasing in developing countries like Nigeria. For instance, incidences of breast cancer in Nigeria have risen from 15.3 per 100,000 in 1976 to 33.6 per 100,000 in 1992 to 52.1 per 100,000 in 2012 (Adesunkanmi, Lawal, Adelusola 2006; Nggda, Yawe, Abdulazeez, Khalil, 2008; Akinde, Phillips, Oguntunde, 2015; Adebamowo, Adekunle 1999; Jedy-Agba, et al. 2012). Similarly, breakdown of cancer cases affecting women in Nigeria are Breast (871 cases), Cervix (290 cases), Ovary (86 cases), Colon-rectum (67 cases), and Connective/Soft Tissue (56 cases). While, the most common cancers affecting men in the country were Prostate (412 cases), Colo-rectum (84 cases), Non-melanoma Skin (73 cases), Liver (63 cases), and Connective/Soft Tissue (56 cases) (Federal Ministry of Health, 2013 & Abdulkareem, 2014). However, the Federal Ministry of Health report covered only 20 states and therefore cancer records from 16 states including Katsina state, were not provided (Federal Ministry of Health, 2013).

Theoretical Framework

Two theoretical frameworks were selected to guide the study in view of their relevance to the research topic. The first framework is the Health belief model developed by Hochbaum and Rosenstock in 1950s designed initially for health education specialists. The main ideas of this model are perceived sensitivity, perceived severity, perceived barriers, perceived benefits, self-efficacy, and cues to action. This model emphasize the need for individuals to have the belief that they can be sick even when there are no apparent signs and symptoms of a disease on them. It therefore, advocates for people to seek for early medical check-up as a means of early detection/diagnosis, prevention and treatment of a disease at the case may be. This is very important particularly for cancer, as two third of all

cancers including breast cancer can be prevented, treated and cured if there is early detection of its signs and symptoms. While, the other one third of all cancer types, can be managed through palliative care. Therefore, under this model, health education is important, as it would allow individuals to develop attitudes of perceived sensitivity, perceived Severity, perceived barriers, perceived benefits, self-efficacy, and take necessary actions to check their health status (Ebadifard, Rahmati, 2012; Glanz, Rimer, Viswanath, 2008; Yilmaz, Bebis, Ortabag, 2013 and Yucel, Orgun, Tokem, Avdal, Demir, 2014).

The second framework selected to guide the study was the Intervention-Based Model of Tannahill (2009). This model addressed three variables - health education, prevention, and health promotion, designed to address individual health needs in societies. This model is similar to the Health belief model discussed above, as it promotes health education and prevention of diseases. But this model emphasizes the need for health promotion which can be achieved through the provision of adequate health personnel and facilities by governments, and other stakeholders. In the case of this research, we are dealing with a situation whereby health facilities and personnel are insufficient or non-existent at the general hospital Katsina. The few women afflicted with breast cancer and reported to the hospital were seen by non-specialists cancer personnel. These health personnel provide early diagnoses, advices and performs simple surgery on the affected breast. Anything beyond their capacity, would necessitate referring them to teaching hospitals located in neighboring states of Kano, Kaduna, Sokoto, and Abuja, where better facilities exist. Another issue which discourages healthcare access in Katsina state in particular is the high cost of treatment, which are beyond the affordability of average breast cancer patients. This therefore, raises the need for government intervention through subsidy mechanism. These two models, therefore serves the purposes of this research.

Data Collection and Analysis

Data collected was analyzed using narratives from the in-depths and semi-structured interviews with key informants, which include a Medical Doctor/General Surgeon, captured as (MD/GS) and a Nurse/Head of female surgical ward captured as (NS) and one Breast Cancer Patient, captured as (BCP). The responses of the Medical doctor came first, those of the Nurse second, and finally those of the breast cancer patient third respectively.

2.1 In-Depth Interviews with Respondents

2.1.1 Status of respondents?

“I am a medical doctor and a general surgeon, working under general surgical department of the hospital” (MD)

“I am a nurse and head of the female surgical ward” (NS)

“I am a breast cancer patient, attending the hospital for treatment” (BCP)

2.1.2 Breast cancer incidences in the hospital?

The first respondent said that:

“Yes, it is increasing due to the following risk factors: change in diet, as most people eat foods known to cause cancer like can foods, smoking, lack of exercise, inheritance, (which account for 5% of breast cancer cases). Records of breast cancer patients operated by the hospital from 2015 to 2019 amount to a total of 113. The breakdown of these figures is as follows: 2015 – 20 cases; 2016 – 11 cases; 2017- 34 cases; 2018- 20 cases and 2019- 28 cases. These figures covered only women operated upon. But, we had also examined several women and gave them treatment, perhaps you can get the statistics from the nurses. However, it should be noted that too advanced cases/metastatic cancers that have spread beyond the breast and other organs like liver, lungs, brain, etc. cannot be curable. Such cases are beyond our capacity as general surgeons and therefore were referred to teaching hospital in Kano, Sokoto and Kaduna states respectively. Furthermore, most of the affected women do not come to hospital due to illiteracy, poverty, and socio-cultural, which requires permission from their husbands and families to come to hospital, which is often denied. Instead they resort to traditional healers, until the situation gets bad or deteriorated”. (MD/GS)

The second respondent said that:

“The hospital keeps a manual record of its breast cancer and indeed all other types of cancers patients, which is not very comprehensive and therefore I can only give you what is available. From available record, the hospital has recorded a total number of 57 breast cancer patients between January 2016 and May 2018. Similarly, from May 2019 to

April 2020, 17 number breast cancer cases were recorded by the hospital, thus given a total of 74 breast cancer cases handled by the nurses. This figure include those operated upon and those hospitalized pending their referrals to teaching hospitals neighboring Katsina state. My general opinion is that number of women afflicted with breast cancer coming to the hospital for diagnoses and treatment appears to be on the increase. This also applies to the state at large, because most women afflicted with breast cancer live in rural areas, their socio-economic status and cultural beliefs affect their attitudes toward seeking medical attention at early stage of the cancer. Instead, most of them resort to seeking medical attention from un-orthodox sources. This worsens their health problems, so much so that by the time they come to hospital, is fairly late". (NS)

While, the third respondent added that:

"As someone afflicted with breast cancer, I can tell you that incidences of breast cancer in Katsina state is increasing, though I don't have exact number of women afflicted with breast cancer. I have come into contact as out-patient with so many women afflicted with the disease. Most of the affected women are poor and rural dwellers, and this affects their ability to seek early health care from hospitals". (BCP)

2.1.3 Nature of treatment of breast cancer?

The first respondent said that:

"The hospital does not have specialized medical facilities and personnel for treatment of cancer cases. However, breast cancer cases and indeed all other types of cancers are examined and necessary treatments given to them. The nature of treatment include first: investigation by physical examination of the breast, and followed by clinical assessment conducted by a radiologist in a laboratory, where test is carried out in order to determine the existence of breast cancer. The second nature of treatment involves conducting ultra-sound for women between the ages of 35 years and below and mammography for women who are over 40 years of age. WE then carry out the third test and once it is confirmed that a cancerous lump/growth exist then we now carry out an operation to either remove the breast completely

(mastectomy) or removal of the lump, which is followed by chemotherapy and radiotherapy, to treat and burn/kill the affected cancer cells to stop its growth. Chemotherapy and radiotherapy are expensive and are not available in Nigeria. So, the patient has to travel out to countries with better healthcare system. This is one area, where government and other stakeholders should give a helping hand, as most of the affected women are poor, illiterate, and rural dwellers. However, if it is discovered that the cancer had reached an advanced stage, then we don't touch it, but we refer them to teaching hospitals, that are better equipped than us". (MD/GS)

The second respondent further said that:

"The hospital attends to breast cancer patients, under the general surgical unit, by general examinations of the affected breast, and appropriate treatment including general advices on how to manage themselves. Where a case requires an operation, our surgeons conduct operation on the affected breast. However, if the situation is beyond the hospital, then the affected patient(s) are referred to teaching hospitals neighboring Katsina state (i.e. Kano, Sokoto, and Kaduna)". (NS)

The third respondent held similar views with the first and second respondents, by adding that:

"The hospital provides general treatment to us in the form of advices, examinations, and surgery on the affected breast, by removing the lump or the entire breast. The hospital also referred patients with serious cases to teaching hospitals in neighboring states of Katsina state, where they have specialized cancer unit, medical facilities and personnel". (BCP)

2.1.4 Effectiveness of medical treatment?

The first respondent said that:

"Cancer if detected early, is much easier to treat and cure. But, if detected late then the treatment becomes difficult and in most cases result in death. So, as far as we are concerned the medical treatment given to patients whose breast cancer are diagnosed at the early stage of their occurrence, the treatment we give them is good and effective.

However, for those patients who came to the hospital when the breast cancer have reached an advanced stage, we have no option but to operate on them and refer them to hospitals with specialized facilities and personnel. To these kind of patients, the quality of treatment given to them can be described as fair, since they are given a medical window to manage themselves”. (MD/GS)

The second respondent added that:

“The medical treatment given to breast cancer patients can be described as fairly effective. The doctors and the nurses, as non-specialist are trying their best within the available medical facilities at the hospital”. (NS)

While, the third respondent further added that:

“The hospital is trying, even though it does not have specialized medical facilities and personnel for cancer diagnoses and treatment”. (BCP)

2.1.5 Availability of health personnel and medical facilities for breast cancer treatment?

The first respondent said that:

“The hospital does not have a specialized cancer treatment unit and specialized medical doctors like oncologist, breast cancer surgeons and nurses trained to handle cancer cases. However, the hospital has been treating breast cancer and indeed other cancers under its general surgical unit. This unit has two general surgeons and nurses that examine, advices and perform surgical operations where necessary. Those operated are admitted at the female surgical ward for further treatment. So, you can see we don't have specialized medical facilities and personnel for breast and other cancers treatment. But, we are hopeful that the government would in due course provide specialized necessary medical facilities and personnel for treatment of all cancer cases, including that of breast. This is in view, of the ever rising incidences of breast cancer cases in the state. Cancer treatment centers are inadequate in Nigeria. So far the country with a population of about 200 Million and with 36 states and a capital territory, can only boast

of the following cancer facilities – 7 radiology centers located at Obafemi Awolowo University teaching hospital, Ife, Osun state; Lagos University teaching hospital, Lagos state; University teaching hospital, Ibadan, Oyo state; University teaching hospital, Benin, Edo state; Usmanu Dan Fodio University teaching hospital, Sokoto state; Ahmadu Bello University teaching hospital, Zaria, Kaduna state, and the National Hospital, Abuja. These centers are not only insufficient to meet the needs of ever increasing breast cancer cases in the country. But, in most times only few of them are operational because the facilities are overstretched, thus resulting in higher breakdown of their equipment”. (MD/GS)

The second respondent also added that:

“The hospital does not have a single specialized trained nurses for treatment of breast cancer patients and other types of cancers. The hospital also does have specialized cancer unit for handling of cancer cases. But, breast cancer patients and other cancer cases are managed by general surgeons and general nurses attached to female surgical ward”. (NS)

While, the third respondent also supported the views of the first and the second respondents by adding that:

“There is no specialized cancer unit and facilities at the hospital. The medical personnel that attend to us are also not specialist on cancer. However, I believe they are trying their best to deal with less complicated cases, while they refer complicated cases to hospital with specialized medical facilities and personnel in Kano, Sokoto, Kaduna states etc. respectively, depending on the choice of the patients. The patient choices is guided by proximity to the hospital, cost of treatment, complications etc.”. (BCP)

2.1.6 Effects of cost of diagnosis and treatment of breast cancer in the hospital?

The first respondent stated that:

“Diagnosis and treatment of all types of cancers, including breast cancer is very costly. For example, to carry out chemotherapy for few

months, at the teaching hospital where the equipment exists, a breast cancer patient would require between 350,000 to 400,000 naira. While, the cost of carrying out radiotherapy is over 1 million naira. This definitely is unaffordable by most of the breast cancer patients and even the few that start initial treatment abandoned it mid-way. This influences patients' decisions to either treat themselves in the hospital or seek traditional medicine, which is not very effective and also lead to complications and even death. Closely, related to cost of treatment, other factors that affects treatment and recovery of breast cancer patients include: late coming to the hospital until when the cancer reached advanced stage of growth, inability of most of the patients to complete their treatment due to socio-economic (i.e. illiteracy/lack of health awareness and education, poverty etc.) and socio-cultural factors such as (lack of permission from husband, misunderstood religious rights on examination of women by male doctors etc.) ". (MD)

The second respondent also stated that:

"Most of the victims are poor and unable to afford treatment of their breast cancer in a conventional hospital. This made them to stay at home, relying on traditional healers, which eventually results in more complications and even death. This lack of awareness of the dangers of late access to orthodox medical facilities by most of the patients is responsible for high morbidity and mortality rates amongst patients afflicted with breast cancer and indeed all other cancers in developing countries, including Nigeria. Therefore, to reduce the rates of fatalities of breast cancer patients, there is the need for government to address socio-economic and socio-cultural factors that hinders access to hospital at early stage of the breast cancer development". (NS)

While, the third respondent further added that:

"Majority of the affected women with breast cancer are illiterate, poor and rural dwellers. Cost of cancer treatment is indeed very high and beyond the reach of most of the affected women. This therefore, explains why there is high rates of morbidity and mortality amongst breast cancer patients. This ugly situation may likely continue, until such a time when breast cancer disease or affliction is taken seriously

by the government, donor organizations, and other stakeholders by way of mass sensitization programs on going for examination of breast at an intervals, its signs/symptoms, dangers, and benefits of early detection and treatment, at conventional hospitals”. (BCP)

2.1.7 Recommendations for Improvement of Breast Cancer Diagnoses and Treatment?

The first respondent recommends that:

“The Katsina state government is trying its best towards the improvement of health care services in the state through various initiatives. It is still not out of place to urge the government to devote more resources in the fight against breast cancer and indeed other types of cancers in the state, in view of the high occurrences. Breast cancer cases are increasing and its treatment is very costly and beyond the reach of most of the affected women. Therefore, I would make the following recommendations as a way of addressing the problems: establishment of a specialized cancer center fully equipped with oncologists, nurses, equipment for diagnoses, radiology and chemotherapy; mass awareness campaign to educate women on symptoms/signs of cancer and the for early treatment at a hospital; collaboration with religious/traditional rulers, NGOs, media organizations, donor organizations and individuals to support government to address the problems of cost, equipment supply, training, public sensitization and empowerment programs to address socio-economic and socio-cultural factors affecting patients attitude towards access to medical facilities early enough. Secondary schools curriculum should include teaching of girls about breast cancer and how to avoid it” (MD/GS)

While, the second respondent offered the following suggestions:

“So far the state government is trying within its limited resources. But it cannot do it alone and this raises the need for collaboration with other stakeholders like print/electronic media, NGOs, traditional and religious institutions, etc. This requires a holistic approach, where by Katsina state government should provide Oncology unit at the hospital fully equipped with specialized personnel, facilities, drugs and inject-

able. Other stakeholders, should assist in areas of public mass sensitization programs on regular examination of breasts, causes, signs/symptoms and the need for early diagnoses and treatment of breast cancer and other cancers if detected, so as to reduce the morbidity and mortality rates in the state”. (NS)

The third respondent also added that:

“There is the need for mass sensitization to educate women of reproductive age about breast cancer, what they should do by way of inspecting their breasts for early sign of cancer, and the need to seek for early medical advices and treatment in a hospital. Government and other stakeholders should also subsidized the cost of breast cancer treatment, as it is very costly and beyond the reach of most of the affected breast cancer patients. Traditional and religious leaders with the support of government and NGOs should also address socio-cultural issues that hinders access to hospital by affected women. Most of the affected women, their breast cancer cases worsen, because their spouses, in-laws, relatives refuses them permission to seek early treatment at hospitals, but instead they are forced to rely on traditional healers, which more often than not worsen their cases”. (BCP)

DISCUSSIONS OF FINDINGS

The findings of the study showed that breast cancer incidences based on the records available at General hospital Katsina was increasing. Between, 2015 to 2019 a total of 113 women with breast cancer were operated upon. Most of the affected women are rural dwellers, poor, and illiterates, who do not seek early medical treatment, until the disease reaches advanced stage. Therefore, if socio-economic and socio-cultural factors are not address alongside with increased sensitization programs on signs, symptoms, and the need to seek for early treatment, then breast cancer burden would continue to rise in the state. This finding is in line with earlier findings on reported increase of breast cancer in Nigeria (Akinde, Phillips, Oguntunde, 2015; Federal Ministry of Health, 2013; Jedy-Agba, Curado, Ogunbiyi 2012; Anyanwu, 2008; Arrow, 2005; and Adesunkanmi, Lawal, Adelusola, 2006).

The findings of the study also indicated that the general hospital Katsina does not have specialized Oncology unit fully equipped with facilities, personnel, drugs

and injectable to treat breast cancer and other cancer cases. At the moment, breast cancer cases and other cancer cases are handled by two general surgeons, medical doctors on internship and scores of nurses. These medical staff are not specialist, but are indeed trying their best to provide medical treatment including operations on the afflicted women. Where, the cases are beyond their capacities, they referred the patients to teaching hospitals neighboring Katsina state. So far, in Nigeria only 7 radiography centers exists and this are in adequate in a country with a population of about 200 million people and about 49% of this population are women. Short-ages of medical personnel and facilities, has been one of the serious problem crippling healthcare performances in Nigeria, and indeed other developing nations of the world, as reported by previous studies: Anderson, Yip, and Ramsey, (2006); Freeman, Muth, Kerner, (1995); Adesunkanmi, Lawal, Adelusola, (2006); Galadanci et al. (2010), Abdulraheem, (2012), Azubuike, and Okwuokei, (2013); Christoph et al. (2014); and Mashi, A.L. (2017).

Cost of breast cancer treatment is quite high and beyond the reach of most the afflicted women, in view of their poor socio-economic and socio-cultural background. For example cost of chemotherapy is between 350,000 to 400,000 naira and while radiography cost over 1 million naira. This no doubt contributed to the poor access to hospitals and seeking early diagnoses by most of the afflicted women, as most of them resort to traditional healers for succor. The consequence of this, worsen their health situation, often leading to their deaths. Previous studies had noted the effects of socio-economic and socio-cultural factors hindering healthcare access in developing countries including Nigeria (Rajaram, and Rashidi, 1999; Olubunmi, et al. 2008; Arafat, Sally, Rachel, and Ali, 2010; Gender Nigeria Report, 2012; Abdulraheem, 2012, FMH, 2004; Aneikwu, 2005; Agnihotri, 2000; Arrow, 2005; WHO, 2005).

CONCLUSION

It is clear that incidences of breast cancer are in the increase in Katsina state, due to factors such as lack of specialized cancer center fully equipped with relevant medical facilities and personnel. Furthermore, incidences of cancer is associated to many factors such as diet, smoking, lack of exercise and inheritance, and it is clear that a holistic approach, whereby all stakeholders (i.e. government, NGOs, traditional/religious institutions, media etc.) is needed to address breast cancer

ailment, in the same way similar killer diseases (i.e. HIV/AIDs, Ebola, Lassa fever, and COVID-19). The Katsina state government is trying itself within the limited resources at its disposal, but it cannot shoulder it alone, hence the need for collaboration with stakeholders, to save breast cancer patients who are most vulnerable.

Furthermore, enhancing the health and well-being of these group of women is necessary for national development, since they constitutes a significant percentage of the population, they are also mothers, and caregivers, whose healthcare interest must to be protected at all means, and by all and sundry.

RECOMMENDATIONS

Katsina state government, cannot shoulder the responsibilities of reducing incidences of breast cancer in the state alone. Therefore, a holistic approach involving all stakeholders (i.e. Katsina state government, NGOs, traditional and religious leaders, the media etc.), are needed to deal with the issue of breast cancer amongst women of reproductive age.

Katsina state government, should strive within its available resources to open a comprehensive breast cancer center, fully equipped with state of the art facilities and the specialized medical personnel to deal with ever rising of breast cancer burden in the state. Breast cancer should be given the desired attention in the same way HIV/AIDS, Ebola, Lassa fever, and more recently COVID-19 pandemic were given.

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